REMARKS

Reconsideration of this application is respectfully requested.

The above amendments to independent claims 1 and 12 incorporate limitations from their respective dependent claims 11 and 22 (now cancelled without prejudice or disclaimer) and are thus not believed to present any substantial "new issue". The above amendments to claims 21 and 31 merely complete correction of the spelling of the word "analyzing" that was intended by the last submission of August 23, 2010.

Accordingly, these amendments are believed to be appropriate under the provisions of 37 C.F.R. §1.116 (i.e., even if applicants' December 27, 2010, Request for Withdrawal of the "final" designation of the last office action is denied). Entry of the above-requested further amendments at least under the provisions of 37 C.F.R. §1.116 is respectfully requested.

The rejection of all pending claims 1-40 under 35 U.S.C. §103 as allegedly being made "obvious" based on the single cited Srinivasa '189 reference is respectfully traversed.

The Examiner's recognition that Srinivasa does not anticipate applicants' invention (by withdrawing that earlier ground of rejection) is appreciatively acknowledged. However, the Examiner's new ground of rejection based upon "obviousness" is also believed to be in error – for at least the same reasons as already noted in applicants'

response filed August 23, 2010. So as not to unduly burden the present record, the earlier August 23 response is hereby incorporated by reference, and the Examiner is respectfully requested to again review this earlier submission.

Applicants' exemplary embodiment for construction of a user model is explained in connection with Fig. 1 at pages 9-18 of the specification. Here, it will be noted that the user model is derived from information such as event records taken from a user's diary of events. As explained in the applicants' summary section of the specification, one advantageous aspect of applicants' invention is that it permits greater utility of inductive logic programming (ILP) – by splitting the learning of a user model into stages. The results from each of these stages is achieved by ILP and then combined to produce a resultant user model (e.g., see page 5, lines 32-35).

In the exemplary embodiment, a first stage involved in learning relates to learning of sequences of plural tasks (e.g., events) from a user's diary. This will be seen to correspond to step 1 in the flowchart of Fig. 1 where pairs of tasks are identified.

After collecting a plurality of such sequences (each sequence comprising a plurality of events taken from the user's diary), this collected set of sequences is then split into separate clusters of sequences so that the learning of each sequence can take place separately within a given cluster (e.g., see the description of step 2 in Fig. 1 at, for example, page 12, lines 31-34, *et seq.*).

At steps 4 and 5 of Fig. 1, for each cluster, the learning problem is further split into a set of problems, one per example attribute where specialized learning is performed and the results are then collected at steps 6 and 7 for each cluster being modelled.

The applicants' specification goes on to explain how the exemplary embodiment model that has been created based upon event records from a user's diary might be used, for example, to predict and suggest new related sequences (or sequence segments) to a user when one event of an identified sequence is entered.

With respect to applicants' independent claims 1 and 12, a similar multi-step process is required. In particular, a plurality of sequences of event records related to activities of at least one individual user is first identified from a plurality of event records relating to activities of at least one individual user. Each such identified sequence of event records is required to contain two or more event records related to activities of at least one individual user.

After the plurality of event record sequences have been identified, then independent claims 1 and 12 each require that a plurality of sequence clusters be determined from the earlier identified plurality of sequences. Each such sequence cluster is required to include a plurality of related sequences.

Next, claims 1 and 12 require that the sequences in each of a plurality of said clusters be analyzed to derive one or more rules relating to the sequences of each cluster.

Finally, claims 1 and 12 require a user model to be provided based upon the rules that were derived in relation to a plurality of clusters.

With respect to the preamble of claims 1 and 12, the Examiner relies upon paragraph [0033] of Srinivasa – wherein the Examiner's parenthetical comment considers the creation/updating of a user's electronic calendar to be a "model".

While Srinivasa does describe creation/updating of a user's electronic calendar at paragraph [0033], this act of creating/updating the user's electronic calendar cannot possibly constitute a logic "model" that drives such creation/updating of a user's electronic calendar. Presumably, the Examiner is intending to refer to the undisclosed driver of such result as a relevant "user model". However, even if it is assumed that there is some undisclosed driver that might constitute a relevant "user model", the only such driver that is possibly even inferred by paragraph [0033] would be a simple multi-dimensional filter defined (somehow) by the user's general categories of interest and/or available times, places, etc. (e.g., as might have previously been provided by the user to such a "driver"). However, there is clearly no possible suggestion that the "driver"

might have itself created the multi-dimensional information/data filter criteria by examination of any data already found in the user's electronic calendar.

As for identifying a plurality of event record sequences, the Examiner relies upon Srinivasa at paragraph [0035]. However, even the Examiner's own parenthetical comments of explanation reveal that Srinivasa merely looks for information from public websites (e.g., a spider, a crawler or the like). Although this paragraph of Srinivasa does use the word "model", it appears that this is simply Srinivasa's terminology for an exemplary embodiment. In any event, to the extent that the multi-dimensional search filter used by such a spider/crawler might be said to constitute a "model", this paragraph, at best, merely suggests that the user has somehow selectively defined particular types or categories of information that are to be filtered. Once again, there is no possible suggestion here that Srinivasa identifies a plurality of sequences of event records related to activities of at least one individual user from a plurality of event records related to activities of at least one individual user, each sequence containing two or more event records related to activities of at least one individual user. Indeed, the Examiner's own parenthetical comments are directed specifically away from the relevant recitations of applicants' claims 1 and 12.

As for determining a plurality of sequence clusters, the Examiner relies upon Srinivasa at paragraph [0036] and item # 416 in Fig. 13. However, paragraph [0036] simply describes well-known web crawlers/agents/spiders/robots that can automatically search for information on the web meeting prescribed filtering criteria. While this paragraph indicates that the web search is based on an event category of interest to the user, or a given set of event categories of interest to the user (such as golf events or concert events), there is once again no indication here as to how such filtering criteria are derived other than possibly by query to the user himself or herself. There is clearly no teaching here involving any sequences of event records related to activities of at least one individual user – let alone determining a plurality of sequence clusters, each sequence cluster comprising a plurality of related sequences of two or more event records relating to activities of at least one individual user. Once again, this paragraph actually teaches away from this aspect of the applicants' claimed invention.

Fig. 13 is described in Srinivasa at paragraph [0076]. Although there is no single block # 416, there are three blocks: 416a, 416b and 416c. While this text and the boxes in Fig. 13 do use the phrase "event clusters", this all relates to a flowchart for analyzing text found in an event markup language (EML) document while searching the web. In other words, this algorithm is related to analyzing a discovered document on the internet to decide whether or not it should be collected as meeting the web crawler

filter criteria. It also has nothing to do with determining a plurality of sequence clusters in any relevant context, each sequence cluster comprising a plurality of related sequences, each sequence containing two or more event records related to activities related to at least one individual user (i.e., as previously identified in the earlier portions of applicants' relevant claims 1 and 12 here at issue).

As for analyzing the sequences in each of a plurality of clusters to derive one or more rules, etc., the Examiner relies upon Srinivasa at paragraph [0077]. The Examiner's comments assert that this paragraph in Srinivasa discloses rules derived via inductive learning. Of course, the applicants have never claimed to be the first to suggest the use of inductive learning programming (ILP), *per se*. However, the Examiner's rather short comment appears to miss the significance of relevant context when claims 1 and 12 are considered "as a whole" (as they must be under 35 U.S.C. §103).

In particular, this feature of claims 1 and 12 requires that the sequences found in each of a plurality of clusters be analyzed – the plurality of clusters having been determined from the plurality of sequences, each sequence cluster containing a plurality of related sequences, each sequence containing two or more event records related to activities of at least one individual user.

Srinivasa at paragraph [0077] merely notes that there is an intention to accurately detect and elicit scheduled events from, for example, the web. Since these events on the web may be found in various unstructured text, Srinivasa proposes special intelligent agent techniques for analyzing the content of such web documents independently of the source of the document or the like. This apparently leads to the document analysis processes that are later described (e.g., in connection with Fig. 13).

While the Srinivasa "rules" may be quite useful for analyzing an arbitrary HTML document to see whether or not it should be selected in accordance with multi-dimensional filter criteria, none of this teaches anything whatsoever as to how the multi-dimensional filter criteria is derived in the first place.

Since the only possibly relevant "user model" that might here be at issue involves the undisclosed "driver" of Srinivasa's web searching filter criteria, there is, at best, in the entirety of Srinivasa, merely a suggestion that somehow (without any detailed disclosure), the user may specify certain types of events, available times, etc., to the search engine or driver.

This is all a far cry from the applicants' claimed invention in claims 1 and 12 for deriving a user model from a plurality of event records that comprise data relating to the activities of at least one individual user. In particular, there is no teaching or suggestion anywhere in Srinivasa that one might, for example, take the already existing contents of

the user's electronic calendar and, from that, derive a "user model" that could be of assistance to the user in suggesting future entries to the electronic calendar.

As to the final aspect of independent claims 1 and 12, providing a user model comprising rules derived in relation to a plurality of clusters, the Examiner simply relies on Srinivasa at paragraph [0033]. However, as previously noted, this paragraph of Srinivasa is not particularly helpful. At best, it simply indicates that somehow a user's electronic calendar can be updated with a listing of events scheduled in the future that are of a "selected interest to the user". If there is a "user model" involved at all in the process of automatically finding specific multi-dimensional data from a public source, there is no indication here of how that "user model" might have been derived – except possibly simply populating multi-dimensional filter criteria with topics, times, etc., provided directly by the user.

The Examiner already recognizes that Srinivasa fails to "disclose the claimed terminology of a plurality of sequence clusters". Nevertheless, the Examiner goes on to assert that this admitted deficiency of Srinivasa would have been "obvious" merely because Srinivasa discloses "finding information from websites related to types of activities and specific events within activity type". However, this discussion by the Examiner does no more than simply describe what a prior art spider/crawler/robot, etc.,

would do by searching the internet and finding information therein that passes a multi-dimensional filter test.

This apparently reveals a failure to so far understand that applicants' plurality of sequence clusters must be construed in the context of these claims "as a whole" under 35 U.S.C. §103. In particular, applicants' independent claims 1 and 12 require not merely a plurality of sequence clusters, but identifying a plurality of sequences of event records and then, based upon the already identified plurality of sequences (e.g., each sequence containing two or more event records), also determining a plurality of sequence clusters – specifically requiring each sequence cluster to comprise a plurality of related sequences. Following this, a plurality of such clusters must be analyzed to derive rules relating to the sequences of each analyzed cluster.

All of this comes before rules are derived in relation to separate clusters and for providing a user model that comprises rules derived in relation to a plurality of clusters.

The Examiner goes on to assert that the claimed plurality of sequence clusters would have been "obvious" because allegedly "...these claim terms have many possible meanings and interpretations, such as interpreting the sequences to be specific events and the clusters to be specific activity types". However, it is respectfully submitted that the appropriate interpretation of words in a claim of a United States patent application must be "in light of the specification" under MPEP §2111. In addition, of course, the

words in a claim must also be interpreted in the context of the claim taken "as a whole" (especially under 35 U.S.C. §103 where this is a statutory requirement).

The Examiner then conclusorily asserts that it would have been obvious "to modify Srinivasa to match the claim language, since the modifications would require neither undue experimentation nor risk of unexpected results". However, with respect, it is noted that even if the Examiner's assertedly "obvious" modifications are effected *arguendo*, one still fails to find any teaching or suggestion of the relevant claim language.

This lack of relevance for Srinivasa is especially emphasized now that independent claims 1 and 12 have been amended so as to incorporate limitations from respective dependent claims 11 and 22 (which have now been cancelled without prejudice or disclaimer).

As to the limitations of dependent claims 11 and 22, although not conveniently labelled, it appears that the Examiner has attempted to address these limitations at paragraph 22 on page 5 of the last office action. Here, the Examiner simply refers to paragraph [0033] of Srinivasa with the following added comment: "...disclosing the creation/updating of user's electronic calendar".

The Examiner's comments, of course, totally ignore the requirement that these claims are describing the "said event records" that are recited in applicants' parent

independent claims 1 and 12 as the basis for identifying plural sequences of event records, clusters of such sequences, analyzing plural such clusters, and using the rules to provide a user model that was derived in relation to a plurality of such clusters.

In short, the Examiner's reference to Srinivasa's paragraph [0033] and brief parenthetical comment reveal a lack of understanding as to what "said event records" actually constitute in the relevant context of the applicants' claimed invention. Indeed, these cited portions of Srinivasa, as well as all others, teach directly away from using something like the user's own electronic calendar existing contents as a basis for deriving a user model that might then be used, e.g., to assist the user in making future diary entries or the like. Instead, Srinivasa merely assumes that somehow the user has specified multi-dimensional filter criteria that are then used to search the internet and possibly populate future contents of the user's electronic calendar. However, there is clearly no teaching in Srinivasa that any event record relating to activities of at least one individual user is itself used so as to identify plural sequences of such user-related event records, and then to further identify clusters of such sequences, etc.

In short, to the extent that Srinivasa has any relevance to the applicants' invention, it clearly demonstrates the non-obviousness and patentability of the applicants' claimed invention.

The Examiner is requested to fully appreciate the difference between "sequences of event records" and "clusters of related sequences", and the requirement in claims 1 and 12 for information to be determined/analyzed at both of these hierarchical levels before a user model can be derived. Srinivasa obtains event records from a general "trawl" of the internet, rather than from a user's own electronic diary, if at all.

Paragraph [0033] of Srinivasa merely suggests that the thing that gets updated is "the user's electronic calendar". It does not suggest that a user model is derived based on information obtained from the user's electronic calendar.

Even if Srinivasa implements (e.g., see paragraph [0056]) the "Hailstorm" service to interface with user-centric applications such as "myProfile", "myLocation", "myNotifications", "myCalendar", "myWallet", etc., there is still no suggestion that this would be for the purpose of obtaining event records from which to derive a user model. It appears that this would only be for the purpose of providing the end-result "event-records" to a user in a convenient form once they have been derived (from data obtained from the internet in general).

Given such fundamental deficiencies of Srinivasa as already described with respect to independent claims 1 and 12, it is not necessary at this time to detail additional deficiencies of Srinivasa with respect to the other aspects of the rejected claims. Suffice it to note that, as a matter of law, it is not possible to support even a *prima facie*

case of "obviousness" unless the cited prior art teaches or suggests or otherwise makes obvious each and every feature of each rejected claim.

Accordingly, this entire application is now believed to be in allowable condition, and a formal notice to that effect is earnestly solicited.

Respectfully submitted,

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